FOUR "COUNTS OF MONTE CRISTO" AND GREAT TRADE OUTLOOK OF MARSEILLE

Sterling Heilig Interviews Men Who Claim to Belong to the Dantes Family of Fiction—The President Wilson Docks and Prospect for Trade With America—What the War Did for French Port.

BY STERLING HEILIG.

MARSEILLE, February 3, 1921.

IN Marseille harbor Edmond Dantes escaped from the Chateau d'If and exclaimed: "The world is mine!"

Every visitor takes the boat trip to the island fortress to see where the innocent youth, unjustly imprisoned for years (in fiction), met the Abbe Foria, tunneling his way out. The future Count of Monte Cristo joined the clandestine digging, received a first-class education in the slow, heart-breaking partnership and finally, the dying abbe's secret of the Borgia billions.

To the guides it is all real. This smooth stone was the good abbe's blackboard; at this small window he taught Edmond navigation by the stars. Here is where the government walled up the tunnel, and it was from this platform that Edmond Dantes, substituting himself for the dead body of his friend, was heaved into the Mediterranean. Ripping himself free from the sack, he swam, was picked up by fishers and finally maneuvered to be left alone on the uninhabited little island where the fabulous fortune in jewels and gold was hidden. After years of privations and patience, "the world is mine!" he said.

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THERE are four men in Marseille who claim to be descended from the Dantes family (which never existed), and dispute which of them is the Count of Monte Cristo. But there are a million or thereabouts of the Marseille population who are convinced that the world is theirs—if America would only let them have it.

The situation is really similar. After years of privations and patience through a bad war, Marseille sees herself linked up magnificently with America—in twenty years, without fail, if not now. But she wants it now!

Marseille has direct steamship connection with the United States, with handsome passenger ships to New York and Providence, R. I.

These considerations have led to the brand-new organization of a similar Marseille line to Canada—and Marseille is convinced that she has the grand situation of French transatlantic passenger ports (with the beautiful tourist trips up from the south of France), if only—but—in case—

The United States may stop emigration just at the time when the growing lines of Marseille need emigrants to carry. "Every line needs emigrants," they admit anxiously, but not French emigrants—oh, no! The line now carries Portuguese and Italians. The transports carry Syrians, now being steered to South America, and of whom it is said that 2,000,000 want to emigrate.

They pass Marseille and feed Marseille prosperity by building up her passenger lines. But Frenchmen do not emigrate. None of the 25,000,000 Europeans and Levantines who threaten to overflow America are French.

"We are too well off in France," says Edmond Dantes, my friend of the Marseille water front, who claims to be the Count of Monte Cristo, if he had his rights. "If I should consent to emigrate—I, Edmond Dantes, French citizen—my French government would settle me as a colon in Algiers, with fruit farm, truck farm, vineyards, pheasants, flocks of sheep and pigs to make hams, and flowers to make perfumes."

"Algiers," he points beyond the shipping, "is just a short trip over there, across our Mediterranean. I could come home once a month on visits."

I am not so sure how truly these four jokers of the Marseille waterfront believe in their claims to be the Count of Monte Cristo, although they are all the time talking about it. What is certain is that they are fathers of families, comfortably well off, retired from "affairs," with infinite leisure to discuss every subject, and that they have glorious confidence in France—and in the future of Marseille.

Pascal, the claimant No. 2, blames American banks for the hitch in general trade conditions. Why do they keep the dollar so high? How can France buy raw materials? His confidence that Americans can do anything is beautiful.

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PASCAL has a son who has taken a subcontract on the pipe line which an American oil company is running back from the Pinede docks, which are just in front of the new President Wilson docks. Marseille is getting a good share of this business and keeping it quiet. They will pump from the tank steamers to a distributing point a few miles back from the quays. The work is nearly finished and Marseille will have the first pipe line in France—the other, from Paris to Havre, will not be finished for two years. Furthermore, these Pinede docks are fuel oil docks. The stuff is arriving and looms large.

"They go back in ballast," worries Pascal, "but coal boats ought not to go back empty—it is not good business. Marseille is getting a lot of that coal which America is shipping to France and is thankful to get it. Our chamber of commerce offered bauxite (aluminum ore) and ochre (for yellow paint) in bulk, for the return trips of the coal ships, but I'll tell you something secretly. They are carrying back Algerian iron ore to America, for its richnessi n manganese."

I could not have learned it from Marseille officials, and am coming to think that the Monte Cristo heirs are my best bet. "Plain" men as they appear, they seem to be connected by ramifications with all the business of the port.

Pascal's son, the contractor, owns a strip of real estate along the Etang de Berre. It is just where the big story comes in.

"There are billions of dollars in it," says Pascal, whose atavism makes him see big. "Billions for America and billions for Marseille. There is no other situation like it for American manufacturers—the free zone of Marseille, when it becomes legally organized."

The Etang is an inland sea, practically touching Marseille's suburbs. It is fully deep enough for big ocean cargo boats—in fact, it is a gulf of the Mediterranean, whose entrance silted shut long ago. Its shores are vast dock space, with deep water to the very edges, with any quantity of vacant land for American manufacturers to set up "finishing" plants when the land around the Etang shall become the promised free zone.

"Hamburg did it," exclaimed Pascal, "and Marseille will do it, in spite of the opposition of a lot of sardine fishers and wine growers, who claim that Portuguese and Spanish products would get fraudulently labeled French in such a zone, to the detriment of French marks. And those manufacturers of north France, they're coming to see that, as competition cannot be avoided, it is best to have it close enough to profit France and keep France posted up to date. Look at the Lyon sample fair! It's the first step to the free zone. Aren't we smart enough to protect ourselves against fraud on our own land?

Marseille is the natural stopping place for American trade to the Levant, the entire Mediterranean and central Europe—not to mention the orient and Africa! Think of the barge, railroad and trans-shipped freights it can give France! Think of the French labor and materials that will be mixed with American merchandise in a Marseille free zone!"

Such "finishing" in France of partly manufactured American goods was a great argument before the war. Then, Marseille dockers earned 6 francs per day—now, they get 24 francs. Skilled workmen got from 8 to 12 francs—now they are paid 24 to 30 francs; but they are still "French wages," low to Americans, and the same is true for French materials—a tempting proposition to American manufacturers seeking an outlet in Europe and the Levant.

"You'll bring your goods into Marseille free zone duty free," promises Edmond Dantes, "and find cheap land in it to set up your warehouses and plants. Here your goods can lie cheaply awaiting market—not in faraway America. In the zone they can be inspected, regrouped or modified to meet local requirements, and all ready for quick shipment in bond to any European country when a sale is made. Of course," he adds happily, "you pay French duties on any such goods sold in France—but only when sold. The world is ours; there's no other combination like it."

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MARSEILLE Chamber of Commerce seems to believe in the zone. It is a governing body, collecting vast revenues, and, bonding them with the Credit Foncier as security for vast loans, it has been enlarging the port of Marseille all through the war.

The President Wilson docks are its latest completed work, spacious, in magnificent deep water, and now, by a decision last week, they are to be left in honor as "the latest," and all funds, for the next seven years, be expended on the entrance ship canal from the Mediterranean to this inland sea of the Etang. It will be a ship canal thirty-three feet deep to receive cargo boats up to 12,000 tons dead weight.

Of course, it will open vast new dock space.

Big barges already enter the Etang, direct to Marseille by the famous Rove tunnel, completed in 1916, and up into all France by the Rove canal, of already thirteen draught, to the navigable River Rhone and the waterways of central Europe. Barges of 1,200 tons dead-weight capacity pass each other continually in both directions. It is the cheapest possible inland transportation, practically unlimited.

"That inland sea," says Edmond, "it's a suburb of Marseille!"

"The world is ours!" takes up Henri Radoub, who looks to me like the true Monte Cristo. "Marseille, today, has twelve miles of utilizable ocean quays and nearly forty miles of port railroads. "Leon, tell the gentlemen how many distinct ocean steamship lines Marseille possesses."

The fourth claimant scratches his chin. He resembles an Irishman, but is pure mouth of the Rhone.

"One hundred and eleven lines," he answers tranquilly.

Citizens of Marseille have a reputation for exaggeration to improve their stories. So I looked up Leon's statement, as I have done for all the others. He underestimates. In the latest bulletin of the port, twenty printed pages of departures and arrivals. I count one hundred and twenty-seven ocean steamship lines. All, of course, are not owned or controlled in Marseille, but their boats are periodically bound for, enter and quit the port on their regular business.

Before the war Marseille received twenty-one million tons of shipping and ten million tons of merchandise. This year she run close to her pre-war figure, toward the eight million tons of merchandise.

"We don't want to emigrate; we want to do business," says Edmond (he speaks for Marseille). We are plain men. Tell this to the plain men of America—France does not want to dump her undesirables on America—France has no undesirables. We want simply to see commerce flourish and pay off our debt. We shall never forget America's generosity. Marseille was full of Americans a year and a half ago. We know them and appreciate them."

They know all about the proposed legislation which would protect American ships to such a point (they think) that it would create a monopoly against the new lines which Marseille is fostering.

"American ships would come to Marseille just the same," I answered, "and more and more."

"U-m!" said Pascal, "yes, but there's business for all. We are now shipping you olive oil, nuts, onions, raisins, grapes packed in sawdust, palm and ground nut oil from Africa and soaps—big Marseille industry. We can take all the cottonseed oil you can send, for soap-making and other uses."

"A misery," interposes Henri Radoub. "Import your silks and so on from Lyons, your ribbons and cotton velvet from St. Etienne by way of Marseille. And all you buy in Switzerland and central Europe have it come by Marseille. It's the cheapest and most direct transportation to and from America for all of it. We are plain men. Tell plain men in America to get out their pencils and calculate."

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HOW wonderful are these "old" men of Marseille!

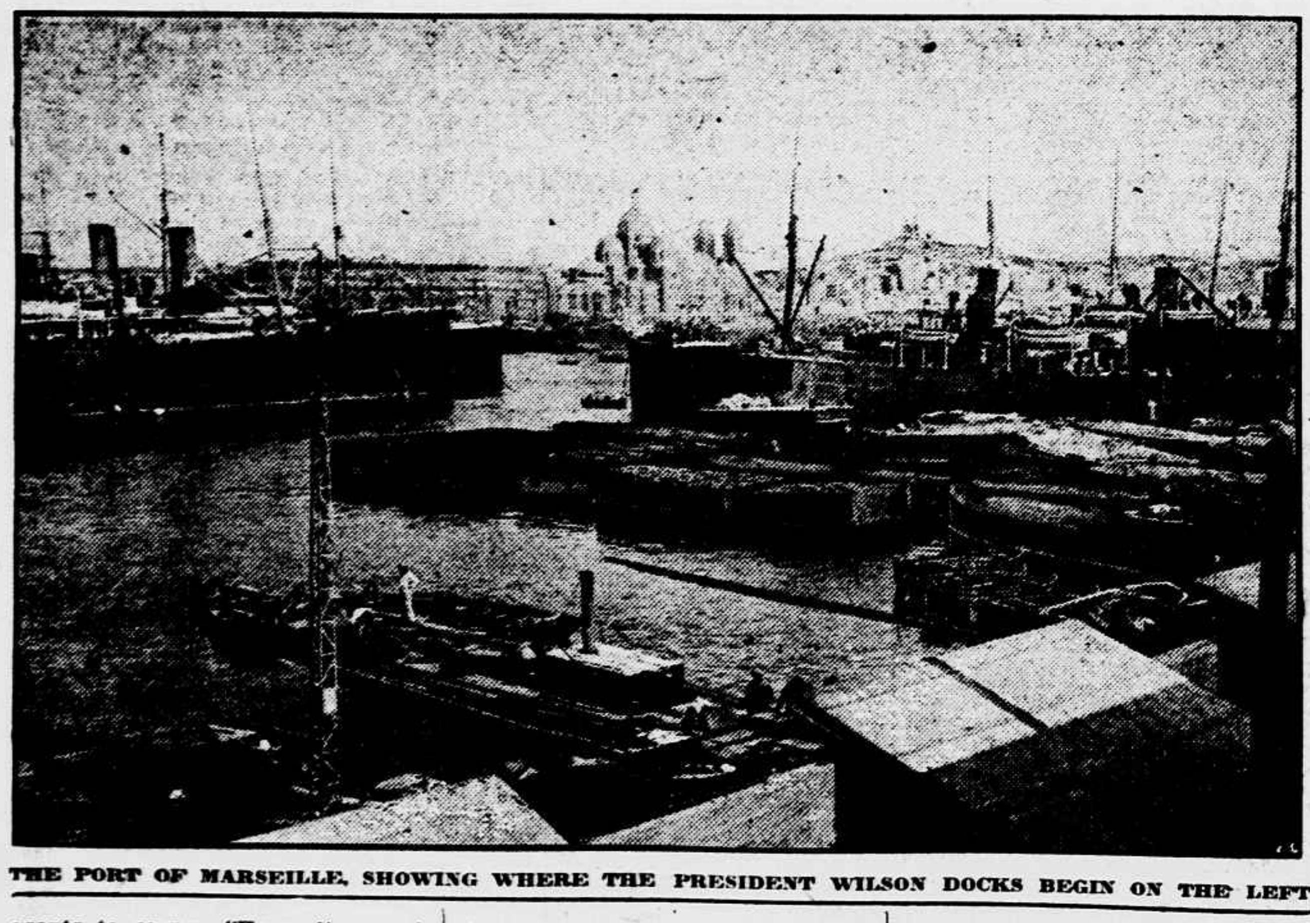
Edmond, Henri, Leon and Pascal sit around the waterside, apparently rough and idle, and they may seem lazy because they look so young. As a fact, each is a grandfather, each lives retired on a decent competence and each has children who are prosperous heads of families. Three of them have been round the world and the fourth owned his own ship.

"Marseille was already a port when Nebuchadnezzar was beating up the Egyptians and preparing to carry the Hebrews into captivity," says Henri. "Its situation always made it the key to the east and west."

I cannot make you see the flooding sunshine, nor the golden morning haze or crimson evening flush, nor hear the deep organ notes of ocean liners coming into Marseille. So, listen to the "plain" men—gay yet anxious.

"American farmers want to sell in Europe?" suggests Edmond. "What do they want in return—paper money? It seems to me that they had better accept goods. Marseille means Europe, the Levant, the orient and Africa. Tut, tut! The world is ours—and yours!"

THE FOUR MEN OF MARSEILLE WHO CLAIM TO BE DESCENDED FROM THE DANTES FAMILY OF FICTION. THEY DISPUTE AS TO WHO IS THE "COUNT OF MONTE CRISTO."



THE PORT OF MARSEILLE, SHOWING WHERE THE PRESIDENT WILSON DOCKS BEGIN ON THE LEFT.

The Secrets of a Fortune Teller

BY RACHEL MACK.

MAYBE you'll be surprised to know I'm not always promotin' the June bride idea and applaudin' the sweet strains of the weddin' march. Just to prove it, I'll tell you about an incident that happened some years ago.

A young girl registerin' about twenty-four summers hurries into the studio for a consultation. While not beautiful, she's pleasant to look at and neat to the last hook. She has that homelike personality that makes you feel like relaxin' and being comfortable—one of the sort who could make a piano box seem like home, sweet home.

"You wish a palm reading?" I ask.

"I do," she answers; "I must make a decision, and I need help."

"Well," I announces, "Clarisse can run up the periscope and give you a peep at the breakers ahead. What's the question that's cuttin' down your sleep?"

"I can't decide," she answers, "which of two men to marry. For a month I've been fighting it out in my mind, and I haven't found the answer yet."

"Hm!" I says, rather thoughtful. "The mind's not exactly the customary place to think this marryin' question out. I believe the heart's conseidered the proper location. Something's wrong. Let's consult the occult."

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SHE gives me her hand, which is large and firm and rather practical. Of course, I lend an eye to the love lines first, expectin' to see a couple of them cutting deep through the mount at the base of the little finger. But imagine my surprise when I find them among the missin'.

"Girlie,' 'I asks, "did I understand you to say that you loved two men and couldn't pick the heavy party?"

"No," she says, very emphatic, "you did not. I said I could not decide which of two men to marry. There wasn't any mention of love in the statement."

"Beg pardon," I says, "my mistake! The truth is, somebody's tryin' to shove you off the dock. What?"

"Well," she says, "you might explain it that way. You see, I've been brought up with the idea that a woman must marry before she's twenty-five. If she doesn't she's a failure."

"So you're tryin' to live up to the family slogan and step off before the fatal day?" I suggest. "Any preference between the two willing victims?"

"Hardly any," she smiles, showin' her sense of humor's not dead yet. "One of them is a kind-hearted shippin' clerk and the other is a fat dentist."

"And neither one of them," I put in, "thrills you any more than a cold potato!"

"Perfectly true," she agrees. "I can't decide which face will look the most monotonous 365 mornin's in the year on the other side of the perculator."

"And there's that extra breakfast every leap year," I says. "But, seriously, why under the sun should you marry either of them?"

"Well," she explains, "you might say it's up to me. My parents have spent all they can afford on me, and there are three younger sisters waiting to step into my shoes. Understand?"

"I see," I says. "Regular little housewife. Just the sort of person for a five-room flat and a vacuum cleaner. It's not surprisin' that you've tried to cultivate a taste for matrimony and the housekeepin' career. Natural mistake."

"You think it is a mistake, then?" she asks rather surprised.

"I know it is," I says. "A woman tied to a man she doesn't love is about as contented as an Eskimo campin' on the equator, and you won't be any exception. Let's examine the lines again."

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I BEGIN to study her hands in earnest, because I see it's a question of choosin' a career and launchin' a lady out on the sea of success. If more people would study their hands instead of their mirrors when they come to the cross-roads there would be fewer mistakes to weep over.

"You're not bookish," I announce, "and you're not musical. I'm also certain that you wouldn't make a second-rate stenographer."

"Right," she agrees. "I've got foresight enough to know that I'd never be anybody's private secretary in fifty years!"

"But you have something else in your hand, girlie," I continues, "that about one woman in every fifty is marked with. You've got executive ability. You'd be 100 per cent efficient in your line. And I'm inclined to think," I says, "judgin' from the spatulate shape of your finger and the news you've already broken to me, that I know what your particular line is!"

"Do you mean to tell me," she asks, leanin' closer, "that you know of some work I could succeed in?"

"I do," I says, "if you are not too proud to begin low. Furthermore, I can have a job for you in twenty minutes if you're willin' to wear a cap and apron."

She says she is.

I pick up the 'phone and get in touch with the small hotel over on one of the lakes where I'd just spent my vacation. It takes me about three minutes to make the proprietor understand that I've got the dining room manager he's been lookin' for all season.

Has she succeeded? I'll say she has! The next time you happen to drop in at the Astorbilt for lunch, look up their new host. She wears imported clothes and the queenly air like she was born to them. But just the same, she's the little girl with the homelike personality and the taste for housekeepin' that I saved from premature matrimony some years ago.

U. S. HAS MONOPOLY ON HELIUM, ONE OF THE GREATEST SCIENTIFIC DISCOVERIES

HELIUM is extracted from natural gas.

It will neither burn nor explode.

The United States has a monopoly on its production.

It makes travel by dirigible far less dangerous.

It is compressed and carried safely.

It was a war-time invention, but is useful in peace times.

The greatest production plant is located in Texas.

ONE hears more about "helium" these days than about that exceedingly scarce article known as "radium." Most every one knows all about radium, but comparatively few know anything at all about helium. This, too, despite the fact that at the present time it is one of the most discussed subjects in the bureau of mines of the Interior Department, Army and Navy circles, the air service and the halls of Congress.

The other day Representative "Dick" Elliott of Indiana, surrounded by a group of friends, was earnestly expatiating on the value of helium to this country, when the writer interrupted with: "What is this helium stuff you are talking about? I'm willing to bite."

"Well," replied Elliott, "as near as I can figure out the thing, its just plain hydrogen with the 'hell' taken out. Or, to put it another way, it's like liquor or beer with the kick extracted—harmless. The use of helium makes dirigible and all other kinds of balloon traveling as safe as a snooze in a haystack. Before helium came into use a single bullet might cause a dirigible, costing millions of dollars, to explode and crash to the earth a blazing wreck. You can no more burn or explode helium than you can light or explode the atmosphere by sticking a lighted match out of the window.

"The bureau of mines has been working on the development of helium for a number of years, and the best way to find out all about the details of it is to go down there and talk to those scientific gentlmen."

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A VISIT to that branch of the federal governmental establishment more than confirmed the wisdom of Representative Elliott's suggestion.

According to Dr. Richard B. Moore of the bureau, the United States is the only country in the world able to secure helium in large commercial quantities, which necessarily gives it a distinct advantage over other nations both in times of war and peace.

Helium is secured from a particular variety of natural gas, a large proportion of which is found in Oklahoma and in the vicinity of Fort Worth, Tex. Immense plants have been established at the latter place by the government, where the helium is taken from the natural gas on its way from the wells to the cities of Fort Worth, Dallas and smaller towns, where it is used for heating and lighting homes and business houses. The removal of helium from the gas as it comes from the wells really improves its burning and heating qualities, due to the fact that helium will neither burn nor explode. It would seem as though nature had made it for the express purpose of use in American balloons, thus enabling fighting men of either the Army or Navy to calmly sail over enemy countries without the least fear of being suddenly hurled into eternity. It will also make it possible for the business men of America to profitably invest their millions in dirigible passenger, express and freight lines, making travel to all sections of the United States a matter of safety, speed and comfort. And, in the event of a little scrap, two or three helium dirigibles could calm an uprising with far greater speed and efficiency than half a dozen regiments of soldiers. A helium dirigible could in a few hours, prowl into mountain fastnesses and drop things into deep canyons that would bring the enemy into the open and to terms.

"Dr. Moore, would you mind telling some of the inside facts concerning the use of dirigibles by the Germans and your discovery and development of helium as a non-inflammable and non-explosive gas?" asked the interviewer.

"Before the war," he replied, "the Germans had spent many years in the development of a type of dirigible which received the name of Zeppelin, after Count Zeppelin, their inventor. These ships were constructed of a number of separate compartments, and had a rigid framework built either of aluminum or later of an alloy of aluminum, called duralumin, which has a tensile strength of mild steel and a specific gravity only a little heavier than that of aluminum. With a capacity of from one to two and a half million cubic feet of hydrogen these vessels were able to travel at from fifty to seventy-five miles per hour and to make long journeys without serious trouble. A trip of 1,000 miles was a small undertaking, and even 2,000 miles was not impossible. Since the war the feat of the R-34, a British dirigible, in crossing the Atlantic is typical of what may be expected from these monsters of the air.

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"IN the early stages of the war the Germans used their dirigibles largely for bombing purposes, particularly over London and the munitions districts of England. Although the damage done from these bombing excursions was somewhat minimized at the time, there is no question, from post-war information, that it was much greater than the public was allowed to believe while the war was in progress.

"Another use for the dirigible which did not appeal so strongly to the public, but which was recognized by military and naval men as probably being more important than the one already enumerated, is the special adaptability of the dirigible for scouting purposes. The Germans used their air fleet to good purpose along this line. The German fleet would never venture from port without two or three dirigibles floating overhead, and these were able to inform the ships below at all times of the near approach of British war vessels. In this manner the German fleet could or coult not, as it saw fit, accept battle or retire to its base. It has been stated that at the battle of Jutland a dirigible circulating above the grand fleet kept the Germans fully informed of the position of the British battleship division while they were engaging the British armored cruisers.

"Gen. E. Lucas, in charge of British dirigibles during the war, informed me that if it had not been for the German dirigibles he had no doubt but the British fleet would have caught and destroyed the German fleet.

"The French and British had no dirigibles at the start of the war, but later made haste as rapidly as possible to repair the deficiency. They recognized, however, on account of the experience they gained from the defence of London and other important points in England that the dirigible was not only vulnerable, but extremely so against a well organized attack. The Germans recognized this also and, therefore, invariably made their attacks on England at night and operated from a high altitude in order to minimize attacks by airplane, for a single incendiary bullet fired into a dirigible would probably bring the huge ship down within a few moments a mass of flames. The inflammability of the hydrogen was the one weak spot in this method of attack, and the British recognized this quite early in the war. In addition, the constant danger of such a death had a strong effect on the nerves of the operating crews, so that, perhaps, the dirigibles were not as efficient as they otherwise might have been.

"The answer, of course, was a non-inflammable gas sufficiently light to take the place of hydrogen as a lifting force. There is only one gas known which has these qualities—namely, helium.

"Helium is found in the atmosphere to the extent of one part in 185,000 by volume. It is found in gases from springs, etc., but during the early stages of the war neither the French nor British seemed to have any knowledge of a source of helium that would be sufficient for the purpose outlined.

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"ON February 28, 1915, Sir William Ramsay wrote a personal letter to me from London, in which, among other things, he said: 'I have investigated blowers, that is, coal-damp rushes of gas, for helium for our government. There does not appear to be anything in the English blowers, but I am getting samples from Canada and the states.'

"He then proceeded to state that personally he did not feel that the idea was at all practical, and also expressed his opinion that owing to the fact that airplanes could operate successfully against dirigibles, their use was not as important as the admiralty seemed to regard it. At the time this letter was received, I was fully aware of the work of Cady and McFarland of the University of Kansas on natural gases of Kansas and their incidental discovery of helium therein, although Ramsay and the British scientific men apparently had forgotten this work. It was, therefore, a question of whether I should or should not inform Ramsay and the British government concerning this work of Cady and McFarland. At the time all government officials were being strongly urged by frequent communications to remain neutral in every sense of the word, and after several weeks of deliberation I decided not to inform Sir William of the large source of helium which was available in this country. Whether I was or was not right in this matter is a question for individual judgment. There is no question, however, that if the matter had been taken up at that time, the history of the war might have been changed to a considerable extent.

"In April, 1917, I attended a meeting of the American Chemical Society in Kansas City, Mo., where a paper on the presence of rare gases in certain natural gases of Kansas was read by Mr. C. W. Seibel of the University of Kansas, who had worked under Dr. Cady. Following this paper, in the open discussion, I mentioned the possible use of helium in dirigibles and advocated that the matter be taken up seriously. G. A. Burrell of the bureau of mines had a short time before this learned of the interest of the British in helium and had also recognized the possibilities of the natural gases of Kansas as a source of supply. In the following June the whole question was brought to the attention of Dr. F. G. Cottrell and Dr. Van H. Manning, director of the bureau of mines, and approval was given by the director to take the matter up with the Army and Navy. Maj. (now Col.) Charles De F. Chandler, in charge of the balloon division of the air service, was interviewed, and he immediately showed great interest in the project. Col. Chandler deserves great credit for his broad-mindedness and foresight in connection with this whole work The matter was also brought to the attention of the Navy officials, and they became also intensely interested. Commanders A. K. Atkins and H. T. Dyer and G. O. Carter represented the Navy, and it is due to the interest of these men and Col. Chandler that the neeessary funds were ultimately made available and the helium project was actually made possible. The importance of the production of helium as a war measure received considerable impetus about this time from a visit to this country of Commander C. D. C. Bridge and Lieut. Commander L. C. Locock of the British navy.

"In order to separate helium from natural gas it was necessary to use a refrigeration process which would liquefy everything present except the helium. To do this, since the helium bearing natural gases were high in nitrogen, it was necessary to ultimately reach the temperature of liquid nitrogen. The separation of oxygen from nitrogen by refrigeration methods had taken a very considerable period of experimentation and involved a large outlay of capital. This meant separating 21 per cent of one gas from 79 per cent of the other. If in the preparation of oxygen a purity of 98½ per cent is obtained, the result is considered satisfactory. In obtaining helium from natural gas, however, it would be necessary to start where the other work left off, owing to the fact that the gas to be treated would contain not more than 1 per cent helium. The undertaking, therefore, was an extremely difficult one.

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"FOR this reason it was decided to use three processes, hoping that one, at least, would solve the problem quickly and efficiently. At the time there were two commercial companies in this country making oxygen from liquid air—namely, the Air Reduction Company of New York, using the Claude process, and the Linde Air Products Company of New York, using the Linde process. In addition, the bureau of mines had been in touch with F. E. Norton, who had a process which could be applied to this work, called the Jefferies-Norton process.

"Funds were appropriated to the bureau of mines for the erection of three experimental plants representing the three processes described above. Two of these plants (the air reduction and the Linde) were placed at Fort Worth and the third (Jefferies-Norton) was located at Petrolia, Tex. The reason for this location was that the bureau of mines, making a quick survey, had found that the natural gas in the Petrolia, Tex., field contained .93 per cent helium. In addition, the volume of the gas was reasonably large, since it was possible at the time in question to pump as much as fifteen million cubic feet of gas per day from the wells. This gas was piped to Fort Worth, Dallas and other towns and an arrangement was made with the Lone Star Gas Company of Fort Worth and Dallas to use this gas from the main pipe line and allow the return of the processed gas after the helium had been extracted to the pipe lines of the company going to Fort Worth and Dallas. This meant that the government would only have to pay for the actual loss of gas during the processing.

"At the time of the armistice 147,000 cubic feet of helium, averaging 93 per cent, was on the dock ready to be loaded for Europe. This gas had been obtained during the experimental work. Altogether, about 200,000 cubic feet of helium was produced by plants 1 and 2.

"Owing to the better results obtained by plant 1, it was decided by the Army and Navy that a large production plant should be built based upon the equipment and operation of plant 1. With this in mind, it was thought advisable to stop the experimental work in connection with plants 1 and 2, and, therefore, on January 23, 1919, the two plants were shut down. A large production plant has since that time been slowly but steadily going up, and on January 1, 1920, was nearly ready to start regular operations. This plant involves an expenditure of about two million dollars for both buildings and equipment. It was constructed under direction of the bureau of yards and docks and will be operated under supervision of the bureau of steam engineering of the Navy. It consists of six units, five of which are operative, and one is to be retained as a spare. Each unit is designed to handle approximately 44,000 cubic feet of natural gas per hour, which gives an approximate total per day of five million cubic feet."

"How do you propose storing your helium until such time as it is needed for war or commercial purposes?" was the next question asked.

"From the financial standpoint the storage of helium is important. At the present time the government has at Fort Worth about one hundred thousand cylinders, holding approximately two hundred cubic feet each. The value of these cylinders is over two million dollars, and the upkeep is considerable. Serious consideration of other methods of storage is, therefore, important.

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"IT has been suggested by J. O. Lewis and G. S. Rice of the bureau of mines that helium might be stored after extraction in concrete chambers in mines. The suggestion is to build a concrete chamber in a drift, with reinforced concrete ends and a manhole, the whole to be lined with sheet copper to prevent diffusion of the gas through the concrete. The gas would be stored under a pressure of 400 or 500 pounds and the walls of the drift would take most of this pressure so that the thickness of the concrete would necessarily be small and largely required for getting a smooth surface for the copper sheeting.

"A good location probably would be in the St. Peter's sandstone in the Mississippi valley, where the sandstone outcrops at the surface, and a long tunnel could be driven into the sandstone at the proper diameter and length. Under such conditions, a chamber 400 or 500 feet long and six or eight feet in diameter might be constructed and lined with copper or sheet lead. It is estimated that the cost of such storage per annum might be as low as from one-tenth to one-fifth of a cent per cubic foot.

"It has also been suggested that helium might be stored in some of the salt deposits of New York. In this state some of the rock salt deposits are sixty feet thick and covered with a fairly heavy overburden. By drilling into the salt and flushing out with a stream of water, a circular cavity could be made in the salt with a long neck, such cavity being forty or fifty feet in diameter. The chamber would be something like a bottle with a very long neck and helium might be stored in such a chamber under pressure satisfactorily. A series of 'bottles' could be placed close together in the same deposit. It is necessary, of course, to know whether helium does or does not diffuse through salt in order to apply such a scheme practically, and this diffusion work is now being done by the bureau of mines.

"The storage in a concrete chamber is being tried out at the experimental mines of the Pittsburgh station of the bureau, and it is expected that the practicability of this method can be determined shortly."

One of the big problems confronting the Army and Navy and bureau of mines at present is the future disposition of the valuable helium plants in Texas. Obviously, these men want these plants kept going and every cubic foot of helium extracted from natural gas as it comes from the earth and safely stored for use in the years ahead. The whole problem is now up to Congress. If the necessary appropriation is made, America will have a monopoly of helium.

THE GOVERNMENT PLANT AT FORT WORTH, TEX., WHERE GREAT QUANTITIES OF HELIUM ARE PRODUCED.

The Connoisseur.

THE hundred or more spurious Renoirs that have recently been foisted on the millionaire art collectors of America led Robert Henri to say:

"These millionaire dupes all claim to be connoisseurs, too. I'm afraid, though, that as a matter of fact they are only connoisseurs in the sense in which Vandyke Brown employs the word

"'What's a connoisseur, pop?' Vandyke Brown's little son once asked him

"'Well, Willie,' Van answered, 'did you notice the fat gentleman with the enormous diamond studs at my studio tea last week?'

"'The one with the sealskin overcoat, who ate his cake with his knife? Oh, yes, I noticed him,' said Willie.

"'Well, son, he is a connoisseur.'

"'But how do you know he's a connoisseur, pop?'

"'By his actions, son.'

"'His actions?'

"'Yes, his actions. The other guests at my studio tea drank my Orange Pekoe, smoked my Egyptian cigarettes, devoured my foie gras sandwiches and took leave. But he—he, son, bought a picture!'"

Sound Camouflage.

A SENATOR said at a luncheon in Brooklyn:

"Prohibition is not being enforced. We hear a lot of loud talk about the dryness of our cities, and this loud talk but drowns the pop of corks, the clink of glasses and much bacchanalian laughter.

"The thing reminds me of a Brooklyn girl. This girl's father sat on his doorstep with a neighbor. The neighbor shouted:

"'Say, Bill, is that your Helen playin' the piano in there?'

"'What say? Speak louder,' roared Bill.

"The neighbor roared back:

"'Is that your Helen playin' the piano?'

"'Sure is! Some little player, ain't she?'

"'Yep, but'—the neighbor's face was red with exertion—'but does she always play as all-fired loud as that, Bill?'

"'Of course not,' said Bill. And he explained:

"'You see, she's got her feller in the parlor, and she's poundin' out that loud music so as to drown the sound of her mother washing' the dishes and growlin' in the kitchen.'"

The Dean and the Duck.

THE late William Dean Howells, while living in Boston, once entertained Mark Twain, Thomas Bailey Aldrich, Bret Harte and other literary celebrities of the past at a sumptuous dinner in his Beacon street residence.

While Mr. Howells was carving a duck his knife slipped and the bird rolled out of the platter and fell to the floor.

"Look out! Here comes the cat!" said Mark Twain.

"It's all right?" said Mr. Howells. "I've got my foot on the duck."

Amid the Labor Unrest.

"THE late William Dean Howells," said a publisher, "was an incurable optimist.

"I called on Mr. Howells one day and as I lighted a cigarette I complained about the quality of the matches.

"This complaint brought out Mr. Howells' optimism beautifully. His eyes twinkled and he said:

"'Let us be grateful, in days like these, for something that doesn't strike.'"